Project: **FIRE SAFE TEST FOR VALVES**

Certificate No.: **122/12 - 9587**

Client: ***J.C FABRICA DE VALVULAS, S.A.***

Office: **Sant Joan Despí (BCN)**

Client's Order No.:: **---**

Date: **03.02.12**

Order Status: **Complete**

Inspection dates

First: **03.02.12**

Final: **03.02.12**

This certificate is issued to

Messrs. **J.C FABRICA DE VALVULAS, S.A.**, upon their request that the undersigned Suveryor to this Society did attend their premises at their works in Sant Boi de Llobregat - Barcelona (Spain) for the purpose of witnessing the FIRE SAFE TEST in accordance with the requirements specified in ISO 10497:2010, on the following type of valve:

A manually operate Ball Valve of 3" bore 3'', as per fig. 6050 1500#
Body and Body connector material A105N
Trim: SEE DRAWING 7496

Marks:

- BODY : Col. T110809
- BODY CONNECTOR : Col. T110809

The test conducted on the valve previously subject to hydraulic pressure was as follows:

The valve in the closed position, filled with water under test pressure, was put in a box and exposed to flames with an environmental temperature in the region 750° C for a period of 30 minutes and established the leakage trough the seat and external to atmosphere during this period. The temperature was checked and recorded every two minutes, while leakages were determined using containers collecting the water leaked during burn period. Afterwards cool-down to 100° C. The valve seat and external hydrostatically tested to the appropiate test pressure and leakages recorded accordingly. Subsequently manually opened up under test pressure differential and finally the valve was fully hydrotested and leakages recorded.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report nº C122/12

SGS Tecnos, S.A.

1. Through-valve leakage during burn period - SATISFACTORY.
2. External leakage during burn and cool-down period - SATISFACTORY.
3. Through-valve leakage during operational test - SATISFACTORY.
4. External leakage during operational test - SATISFACTORY.
5. Operatibility to full open position and external leakage - SATISFACTORY.

The valve was subject to a visual examination with satisfactory results and subsequently dismantled in order to verify that valves components comply with the drawing and parts list supplied by the manufacturer, while seat rings were found completely destroyed.

The manufacturers Fire Safe Test Report nº C122/12 and drawing 7496 herewith attached were satisfactory checked and signed.

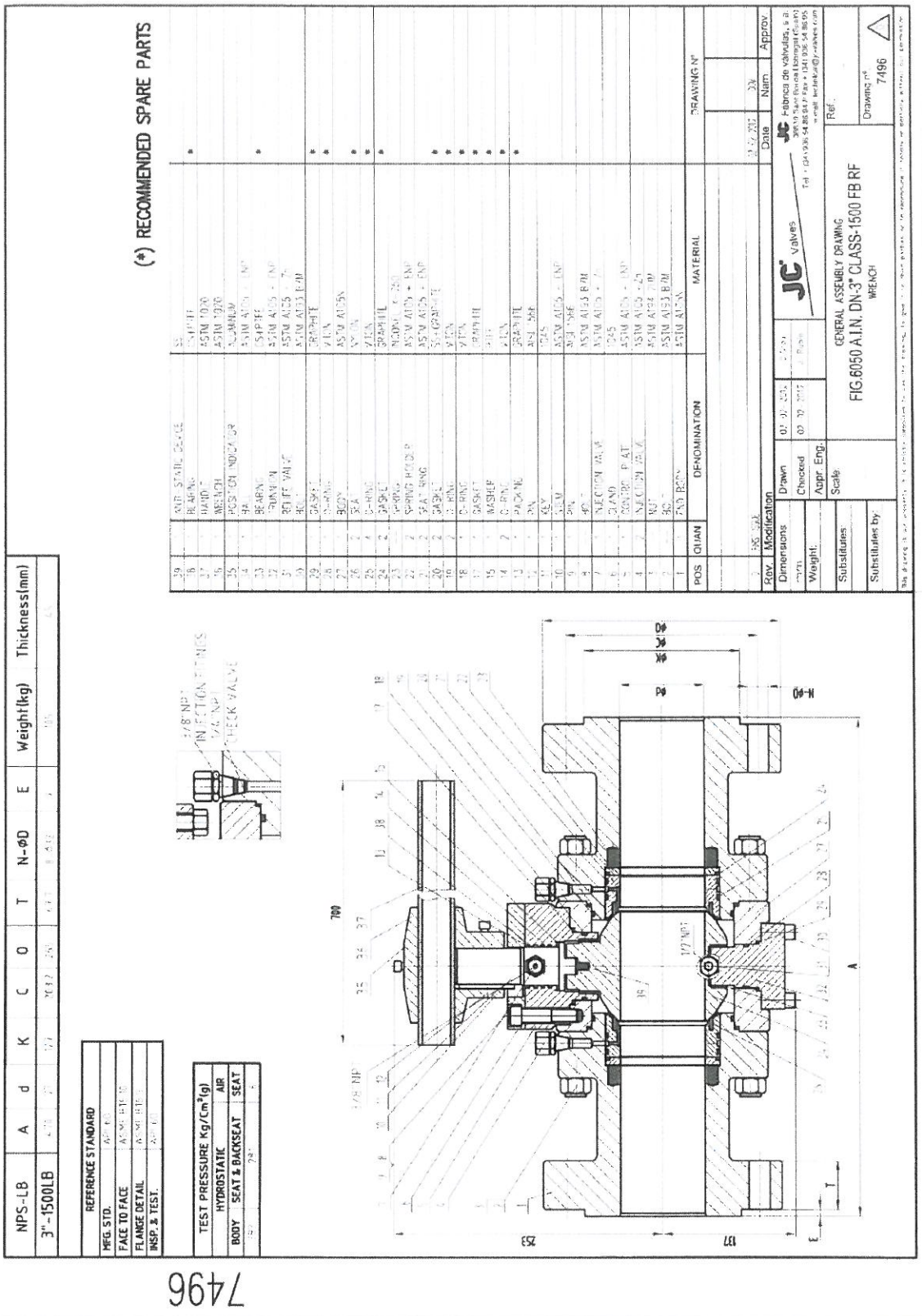
The above is considered in accordance with the mentioned specifications requirements, therefore the subject valve has satisfactory passed the prescribed fire test and can be also qualified as follows.

DN	CLASS RATING	PN RATING
3", 4", 5", 6"	1500#, 2500#	260, 420

SGS Tecnos, S.A.

Surveyor Iñigo Labrador

DOCUMENTS ATTACHED:
Sheets reviewed and stamped
Accordingly.



Project: **FIRE SAFE TEST FOR VALVES**

Certificate No.: **229/12 - 9587**

Client: ***J.C FABRICA DE VALVULAS, S.A.***

Office: **Sant Joan Despí (BCN)**

Client's Order No.:: **---**

Date: **04.26.12**

Order Status: **Complete**

Inspection dates
First: **04.26.12**

Final: **04.26.12**

This certificate is issued to

Messrs. **J.C FABRICA DE VALVULAS, S.A.**, upon their request that the undersigned Suveryor to this Society did attend their premises at their works in Sant Boi de Llobregat - Barcelona (Spain) for the purpose of witnessing the FIRE SAFE TEST in accordance with the requirements specified in ISO 10497:2010, on the following type of valve:

A manually operate Ball Valve of 2" bore 2", as per fig. 6050 1500#
Body and Body connector material ASTM A105N
Trim: SEE DRAWING 7497

Marks:

- BODY : Col. T110809
- BODY CONNECTOR : Col. T110809

The test conducted on the valve previously subject to hydraulic pressure was as follows:

The valve in the closed position, filled with water under test pressure, was put in a box and exposed to flames with an environmental temperature in the region 750° C for a period of 30 minutes and established the leakage trough the seat and external to atmosphere during this period. The temperature was checked and recorded every two minutes, while leakages were determined using containers collecting the water leaked during burn period. Afterwards cool-down to 100° C. The valve seat and external hydrostatically tested to the appropiate test pressure and leakages recorded accordingly. Subsequently manually opened up under test pressure differential and finally the valve was fully hydrotested and leakages recorded.

All the following values were determined and recorded together with temperatures, times and pressures as shown on manufacturers Fire Safe Test Report nº C229/12

SGS Tecnos, S.A.

1. Through-valve leakage during burn period - SATISFACTORY.
2. External leakage during burn and cool-down period - SATISFACTORY.
3. Through-valve leakage during operational test - SATISFACTORY.
4. External leakage during operational test - SATISFACTORY.
5. Operatibility to full open position and external leakage - SATISFACTORY.

The valve was subject to a visual examination with satisfactory results and subsequently dismantled in order to verify that valves components comply with the drawing and parts list supplied by the manufacturer, while seat rings were found completely destroyed.

The manufacturers Fire Safe Test Report nº C229/12 and drawing 7495 herewith attached were satisfactory checked and signed.

The above is considered in accordance with the mentioned specifications requirements, therefore the subject valve has satisfactory passed the prescribed fire test and can be also qualified as follows.

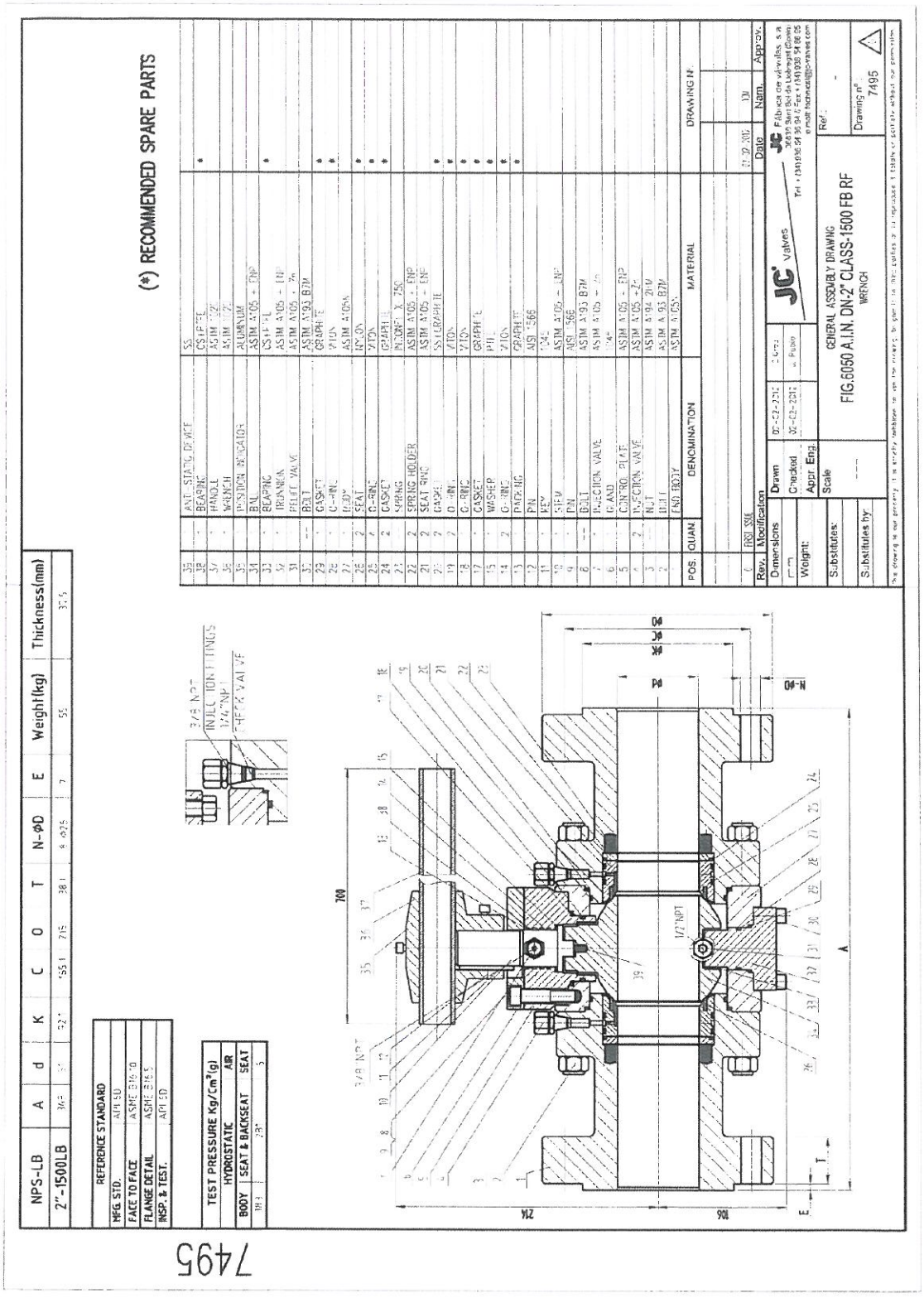
DN	CLASS RATING	PN RATING
2" and below 2 ½", 3", 4"	1500#, 2500#	260, 420

SGS Tecnos, S.A.

Surveyor Iñigo Labrador

DOCUMENTS ATTACHED:
Sheets reviewed and stamped
Accordingly.

Certificate No.: **229/12 - 9587**
Office: **Sant Joan Despí (BCN)**
Date: **04.26.12**
Sheet 3 of 3



SGS Tecnos, S.A.